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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,962

05/12/2005

Juha Leimu

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9117

27799 7590 11/23/2007  
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EXAMINER

HUG, ERIC J

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/532,962	<b>Applicant(s)</b> LEIMU ET AL.	
	<b>Examiner</b> Eric Hug	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 September 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,5-8,10-12,14 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5-8,10-12,14 and 19-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

The following is in response to the amendment filed on September 14, 2007.

***Response to Arguments***

Applicant's arguments filed September 14, 2007 have been considered.

The amendment to claim 7 overcomes the rejections under 35 U.S.C. 112, second paragraph, set forth previously.

Applicant has overcome the rejections set forth previously over Jokinen (WO 00/50693), alone or with Khan (US 6,152,597), and over Schiel et al (US 5,341,579). Applicant argues that the claimed bellows is not taught or suggested by any of the applied references. It is recognized that this feature is not present.

A new grounds of rejection is set forth based on Jokinen. The supporting reference Khan applied previously has been replaced with Khan (US 6,740,204), which is deemed to be more applicable to the present invention regarding the means of adjusting the location of a sealing element. Further supporting reference Anderson (US 6,592,721) has been provided to show what is known in the art regarding the use of a bellows or like to urge a sealing element against a moving surface.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 5-8, 10-12, 14, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jokinen (WO 00/50693) in view of Kahl (US 6,740,204) and Anderson (US 6,592,721).

Jokinen discloses a paper machine with two drying cylinders 10 and 12, a turn roll 14 arranged between the cylinders, and a paper web 16 supported by a wire 18. The wire forms a pocket 20 between the two cylinders and turn roll. The wire 18 forms an opening nip 22 over the first drying cylinder and a closing nip 28 over the second drying cylinder. A blow box with throttling means 50 is arranged in the pocket region. The blow box and throttling means extends across the width of the web. The throttling means is a cross-direction mechanical sealing element that creates a negative pressure region. In Figure 9, the mechanical throttling means 50 is a wave-shaped blade 51' projecting toward the wire 18 with the aid of a spring 51. The wave-shaped blade is equivalently a labyrinth sealing element. The shape creates regions of negative pressure that prevent or reduce air flow between those regions. Its position is adjustable relative to the moving wire. The negative pressure effect created by the sealing element can be controlled by moving the blade closer or further from the moving wire. The blade is presumed to be stiff enough to provide the desired negative pressure effect. See particularly page 19, lines 1-21 for a description of the blade, its position relative to the wire, and its function.

Not disclosed by Jokinen is the use of a pressure medium for guiding the location of the sealing element relative to the moving wire rather than a spring element. Kahl discloses a

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sealing element for creating low pressure regions against a moving wire in a paper machine dryer section. The sealing element is similar in construction as that of Jokinen and used in a similar manner. Kahl discloses a pressurized actuating element as a known alternative to a spring loading element. Compare Figures 4 and 5, and see column 7, line 56 to column 8, line 2. One skilled in the art would recognize utilizing a pressurized actuating element as a known alternative to a spring in the sealing elements of Jokinen for the purpose of controlling the position of sealing element along the moving wire. The pressure loading element is not a bellows as claimed. However, a bellows is a known type of actuating device for positioning a sealing element against a moving surface. Anderson is cited here to exemplify the use of a bellows (pressurizable flexible tubes) as an alternative to a spring for urging a sealing element against a moving surface (in this instance, a sealing element is urged against the inside surface of a rotating roll). Compare Figures 7 and 8, and see column 7, lines 18-36. Because the use of a bellows is known in the art for positioning a sealing an element against a moving surface, it would have been obvious to use a bellows as a known alternative to a spring for positioning a sealing element against a moving wire in Jokinen.

Regarding claim 5, throttling means may be arranged as successive elements. See Figures 4, 4b, 9, and page 19, lines 8-10, of Jokinen.

Regarding claim 6, the blow box of Jokinen is effectively a frame for mounting the blade.

Regarding claim 7, the blade of Figure 9 is a multi-labyrinth sealing element.

Regarding claims 8 and 19-21, Anderson teaches using a pressure medium for expanding/contracting the bellows.

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Regarding claims 10-12, the blade swivels about a hinge-like pivot point on the frame of the blow box. This pivot point is located higher than the blade itself. The blade is therefore deemed to be arranged so that gravity pulls the blade away from the wire and the pressure effect creates air flows that draw the blade towards the fabric.

Regarding claim 14, Kahl, see column 5, lines 12-14, teaches some of the claimed materials of construction for a sealing element.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rhode (US 5,639,095) discloses labyrinth seals.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Eric Hug  
Primary Examiner